

September 29, 1999

Mr. Larry Tucker
Engineering Field Activity NW
19917 - 7th Ave NE
Poulsbo, Washington 98370-7570

Re: Response to Comments on
Draft Sampling and Analysis Work Plan
Site Hazard Assessment
Gorst Creek Landfill
Gorst, Washington
J-7057-12

Dear Mr. Tucker:

This letter presents our formal response to comments for the Draft Sampling and Analysis Work Plan for a Site Hazard Assessment at the Gorst Creek Landfill (Bremerton Auto Wrecking Yard Landfill) near Gorst, Washington. This work was performed by Hart Crowser for Engineering Field Activity, Northwest (EFA,NW) under Contract No. N44255-98-D-4408, Delivery Order No. 12.

As specified in the Scope of Work for this project, all comments on the draft Work Plan were compiled by EFA,NW and forwarded to Hart Crowser. This document responds to comments received from Mr. Peter C. Brooks of the Washington State Department of Ecology (Ecology), Toxics Cleanup Program and Mr. Scott Pozarycki, Biologist for the Suquamish Tribe. Copies of the comment correspondence are attached to this letter for reference. Responses to these comments will be provided in the same sequence as they appear in the correspondence, starting with Ecology comments. Ecology comments have been numbered by Hart Crowser to facilitate cross-reference between the comments and our responses. Suquamish Tribe comments were already numbered. Please note that the Ecology comment correspondence

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was obtained electronically and does not include the signature of Mr. Brooks. Responses to the specific comments are presented below.

Response to Ecology Comments

1. **Page 8. Soil Sampling**

The landfill mass represents a heterogeneous collection of debris from a wide variety of sources over approximately 20 years. Because of this, it would be difficult to collect "representative" samples of the landfill mass. In addition, as noted in the draft Work Plan, the stability of the landfill mass is questionable. Without some information regarding stability, it would not be prudent to mobilize drill rigs or other heavy equipment required for intrusive sampling onto the landfill mass.

We do not propose to conduct intrusive sampling of the landfill mass at this time. Instead, as a separate task for this project, Hart Crowser will refine the estimate of the types and volumes of potential site contaminants in the landfill. In addition, we will characterize the landfill mass physically, to include the dimensions and volume. The estimates will be based on a review of historic documents, including permits, correspondence, newspaper articles, and any other artifacts providing information on landfill operations. The estimate obtained under this separate task will be included in the final report for the project.

2. **Page 8. Soil Sampling**

As noted in the comment, much of the landfill mass is covered with vegetation, reducing the potential for wind dispersal of soil. Some areas of the front (north) face of the landfill currently have exposed soil as a result of recent slides. Hart Crowser will collect three composite surface soil samples to a depth of 6 inches, comprised of four points for each sample, from exposed areas of the north face of the landfill in an effort to characterize soils available for wind dispersal and erosion. The three additional surface soil samples will be analyzed for the same suite of analytes as the original four soil samples proposed. No additional QC samples will be collected or analyzed. Finally, the three samples will be analyzed for soil grain size distribution to determine the potential for wind dispersal and erosion. Surface soil samples will not be collected from areas of the landfill that are not known to be stable.

3. **Page 9. Surface Water and Freshwater Sediment Quality Investigation**

The Work Plan will be modified to relocate sediment samples in depositional areas immediately upgradient and downgradient of the landfill mass in Gorst Creek. Associated surface water sample locations will also be relocated to correspond with the sediment samples. In addition to the analyses proposed for sediments in the draft Work Plan, samples will also be analyzed for total organic carbon and grain size distribution. Data

analysis for the final report will include a comparison of these parameters from areas upgradient and downgradient of the landfill mass to determine the potential for impacts to aquatic benthic organisms from the landfill.

Hart Crowser will revise the Work Plan to indicate that sampling will be conducted during or immediately following a rain event, and will include measurement of stream flow, temperature, and dissolved oxygen at the time of sampling.

4. Page 9. Groundwater Quality Investigation

Based on further review of the types and availability of groundwater wells in the Gorst Creek area, Hart Crowser will not sample the Bremerton Water District wells originally proposed in the draft Work Plan. Instead, Hart Crowser will coordinate efforts with the Bremerton-Kitsap County Health Department (BKCHD) to sample three drinking water wells downgradient of the landfill. These wells are located closer to the landfill and are believed to provide a better indicator of potential impacts to groundwater from the landfill. Data from these wells will also provide information necessary for the completion of the drinking water section of the Site Hazard Assessment. Hart Crowser will also investigate the potential for sampling drinking water wells upgradient of the landfill.

To expedite this scope of work, installation of new groundwater monitoring wells is not proposed at this time. Access to the Gorst Creek ravine and the property surrounding the ravine is extremely limited. There are currently no developed roads into the ravine, and construction of an access road would take time. In addition, most of the surrounding property is privately owned, and the process of obtaining access to these areas may require several months. Finally, installation of new wells in areas of the ravine may result in an increased release of silt to Gorst Creek, which could pose a threat to the Suquamish fish hatchery located downstream.

5. Page 11. Groundwater Sampling Procedures

Comment accepted. The final Work Plan will be modified to reflect this revision.

6. Page 23. Data Management Plan

Comment accepted. The final Work Plan will be modified to reflect this revision.

7. Page 25. Health and Safety Plan

Comment noted.

Response to Suquamish Tribe Comments

1. Although we agree that assessment of impacts to the fish hatchery is of primary concern, no sampling of fish tissue will be conducted during this phase of work. Instead, analytical data from surface water and sediments will be reviewed by an environmental toxicologist to determine if any contaminant concentrations pose a threat to the fish population. This assessment may prove valuable in determining the need for fish tissue studies in the future. We thank you for your offer to donate fish for a tissue study.
2. Comment accepted. Sampling will be conducted during the late fall, which is typically a time of heavy rainfall in the Pacific Northwest. Hart Crowser will revise the Work Plan to indicate that sampling will be conducted during, or immediately following, a rain event.
3. As part of this scope of work, Hart Crowser has conducted a limited geotechnical study of the landfill mass to assess active erosion and the potential for slope failure. This information will be used to assess impacts to the fish hatchery. Results will be provided in the final report.
4. As part of this scope of work, analytical data from surface water and sediment samples will be reviewed by an environmental toxicologist to determine if any constituent concentrations pose a threat to the fish population.

We trust these responses adequately address the comments received. Please call if you have any questions or further comments.

Sincerely,

HART CROWSER, INC.

ELISABETH BLACK
Project Manager

MATTHEW F. SCHULTZ, P.E.
Contract Manager

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Attachments:

Comments from Peter C. Brooks, PE, Washington State Department of Ecology, September 16, 1999.

Comments from Scott Pozarycki, Biologist for the Suquamish Tribe, September 14, 1999.

7057-12/CommentsSAP.doc